RadMon for Aces and SciCos

- How it works
- How to respond to automated aborts and alarms
- How to manually abort the TeVatron
- Summary – your responsibilities

The Hardware

- On either side of beampipe @ z = +/- 4.3 m sits a <u>B</u>eam <u>L</u>oss <u>M</u>onitor (four total)

- BLM signal (prop. to ***dose rate***) amplified and digitized in CAMAC modules in control room

- Signal compared with preset thresholds; if too high, drop 5V enable to TeVatron

- Signal also integrated to keep a record of accumulated dose

Monitoring – ACNET E20

Monitoring – Fast Time Plots

- Keep a Fast Time Plot of the **integrated dose** going at all times on the ACNET terminal

- Just click on "SVX" on the E-Z Writer page (E11)

- The four integrated BLM doses are E:SVRAD0 – E:SVRAD3

Alarms and Aborts

- **Automated** aborts triggered by high *dose rates* – 12 rad/s

- **Manual** aborts triggered by high *integrated doses* – thresholds depend on what MCR is currently doing (shots, stores, or studies)

- If more than 18 rad collected in past minute, an **automated integrated dose alarm** will sound – start paying close attention to integrated doses (E20 or FTP) in case you have to manually abort

Manual Aborts

- Three successively higher thresholds (~krad, posted by ACNET terminal) must be crossed before you trigger a manual abort

  1. **CDF Manual Alarm** – SciCo alerts MCR

  2. **MCR Manual Abort** – MCR aborts beam

  3. **CDF Manual Abort** – SciCo aborts beam

  …ultimately, safety of SVX is in OUR hands!

How to Manually Abort

- In lieu of crash button, manual aborts effected by *lowering automated abort threshold to below pedestal*

  1. Go to ACNET E48, click on "335"
  2. E:SVBLA1 – change yellow number to 10, click "CAUTION!" to confirm
  3. E:SVBTA1 – change yellow number to 10, click "CAUTION!" to confirm

Recovering from Aborts

- All spelled out in CDF procedure 106 – read it!

  1. Silence sono-alarm

  2. Page RDCO, CDF Ops Manager

  3. Once Ops Manager gives the OK, reset the abort hardware (see web pages)

  4. Make an e-log entry, of course

Summary

- Page RDCO if any kind of alarm, abort, or something seems awry
- If any E:SVRAD* activity during your shift, put an ACNET summary plot in e-log
- Constantly monitor E:SVRAD* whenever beam in TeVatron; during high losses, be checking against the manual alarm/abort thresholds
- SciCo should alert MCR when high losses seen
- Further reading: CDF PROC 106 and the RadMon web pages (linked from Monitoring Global page)